Docket No.: MSFT-0767/186581.1
Inventors: Jian Cao et al.
Filing Date: Herewith   Serial No.: Not yet assigned
Title: Systems and Methods for Providing Runtime
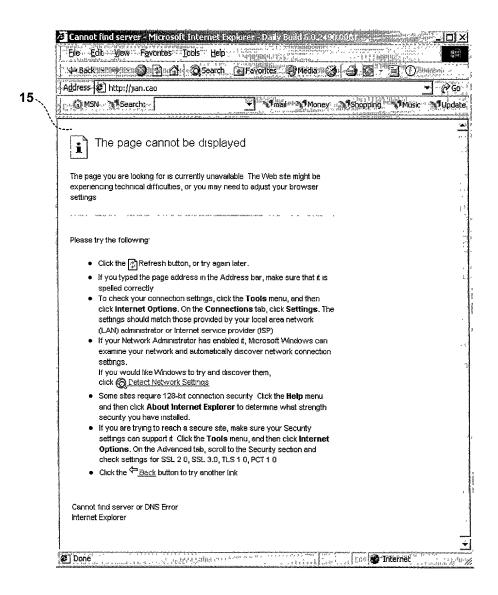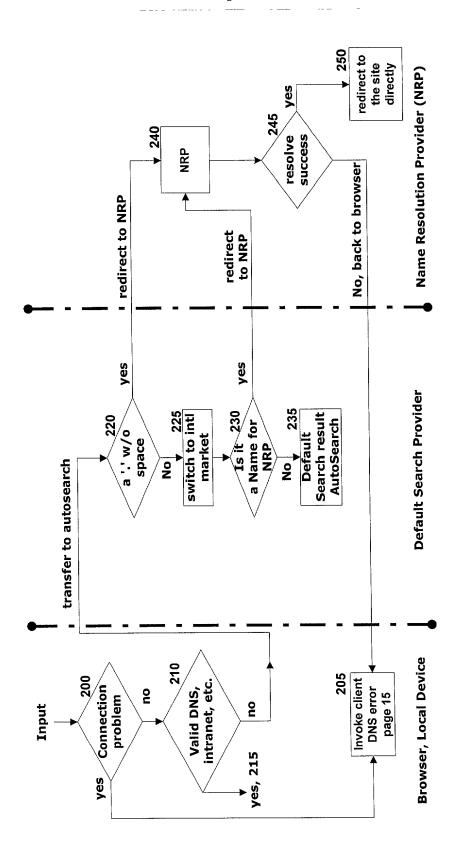Universal Resource Locator (URL) Analysis and
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Prior Art

Cannot find server - Microsoft Internet Explorer - Daily Build 6.0.2490.0000

File   Edit   View   Favorites   Tools   Help

Back   Search   Favorites   Media

Address http://jian.cao

MSN   Search: mail   Money   Shopping   Music   Update

The page cannot be displayed

The page you are looking for is currently unavailable The Web site might be experiencing technical difficulties, or you may need to adjust your browser settings

Please try the following:

- Click the Refresh button, or try again later.
- If you typed the page address in the Address bar, make sure that it is spelled correctly
- To check your connection settings, click the **Tools** menu, and then click **Internet Options**. On the **Connections** tab, click **Settings**. The settings should match those provided by your local area network (LAN) administrator or Internet service provider (ISP)
- If your Network Administrator has enabled it, Microsoft Windows can examine your network and automatically discover network connection settings.
  If you would like Windows to try and discover them,
  click Detect Network Settings
- Some sites require 128-bit connection security Click the **Help** menu and then click **About Internet Explorer** to determine what strength security you have installed.
- If you are trying to reach a secure site, make sure your Security settings can support it Click the **Tools** menu, and then click **Internet Options**. On the Advanced tab, scroll to the Security section and check settings for SSL 2 0, SSL 3.0, TLS 1 0, PCT 1 0
- Click the Back button to try another link

Cannot find server or DNS Error
Internet Explorer

Done   Internet

Fig. 1

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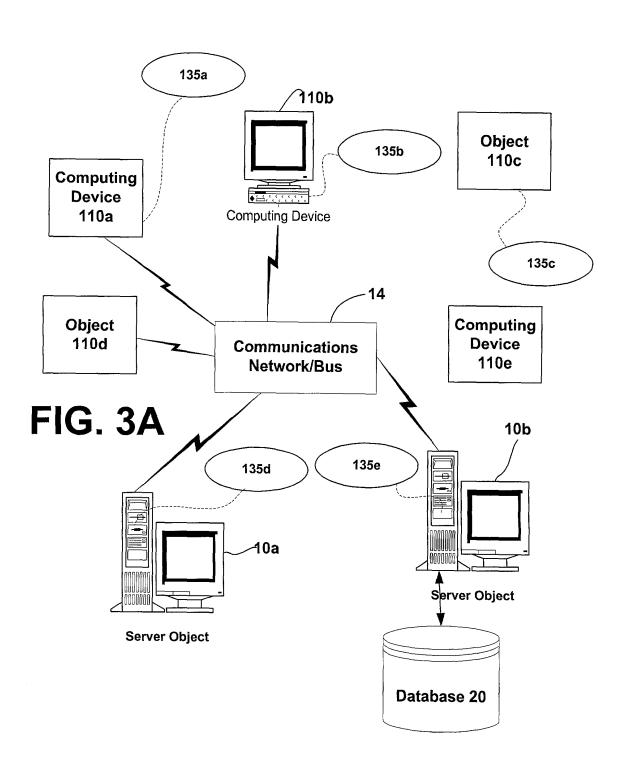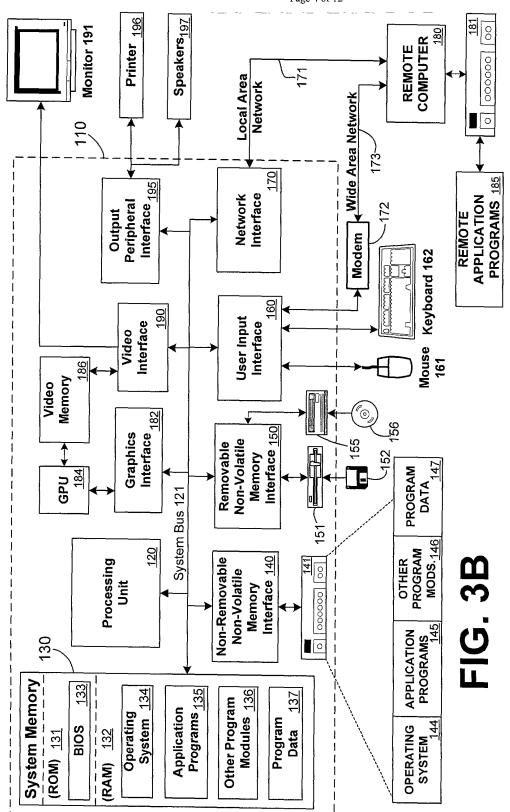Universal Resource Locator (URL) Analysis and
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Fig. 2 - Prior Art URL
Input Processing

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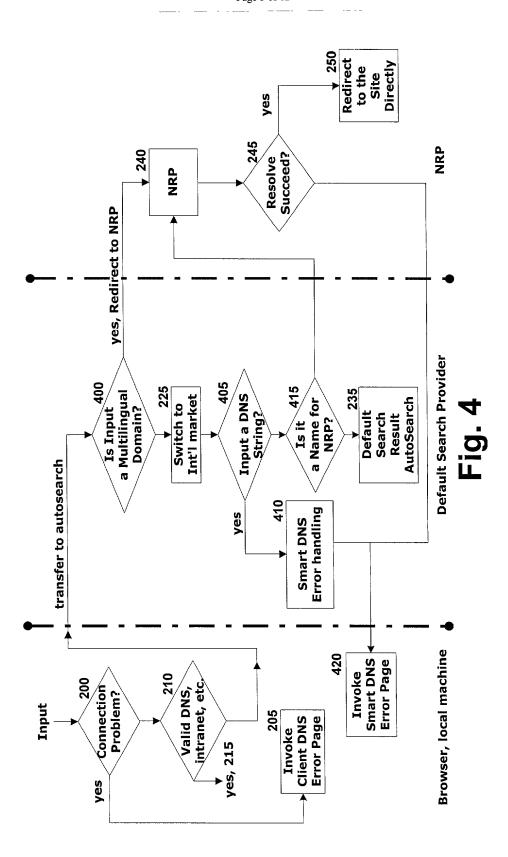Inventors: Jian Cao et al.
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135a

110b

135b

Object
110c

Computing
Device
110a

Computing Device

135c

14

Object
110d

Communications
Network/Bus

Computing
Device
110e

FIG. 3A

10b

135d

135e

10a

Server Object

Server Object

Database 20

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Computing Environment 100

FIG. 3B

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Fig. 4

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Title. Systems and Methods for Providing Runtime
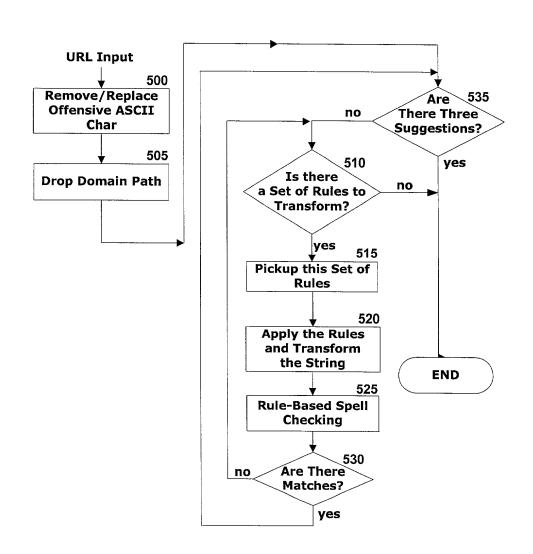Universal Resource Locator (URL) Analysis and
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URL Input

500

Remove/Replace Offensive ASCII Char

505

Drop Domain Path

535

Are There Three Suggestions?

no

yes

510

Is there a Set of Rules to Transform?

no

yes

515

Pickup this Set of Rules

520

Apply the Rules and Transform the String

525

Rule-Based Spell Checking

530

Are There Matches?
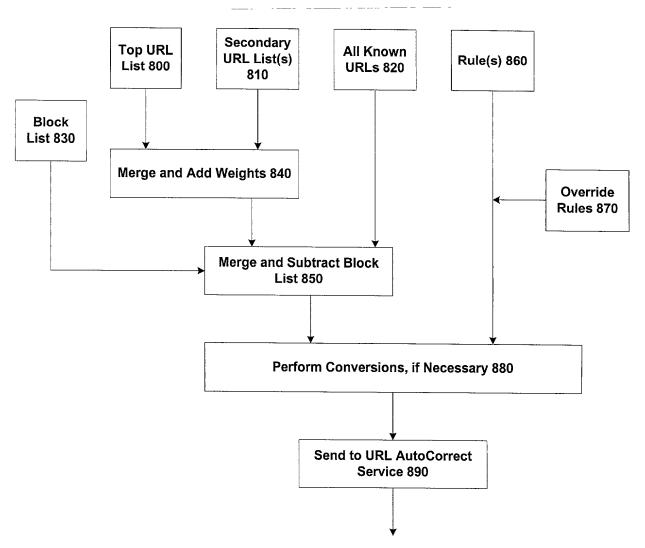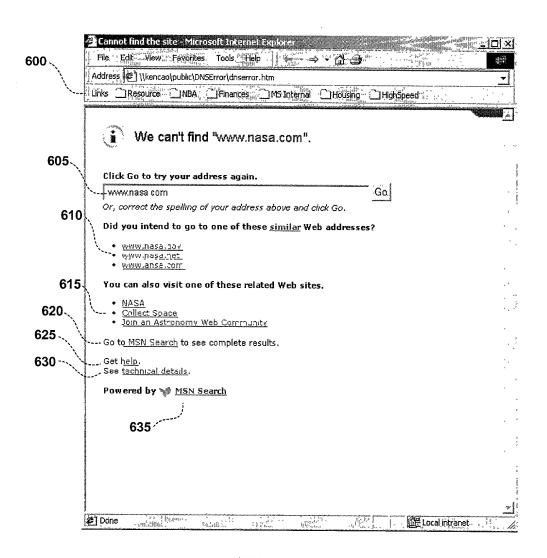
no

yes

END

Fig. 5A

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```
┌──────────┐   ┌──────────┐   ┌──────────┐          ┌──────────┐
│ Top URL  │   │Secondary │   │All Known │          │Rule(s) 860│
│ List 800 │   │URL List(s)│  │ URLs 820 │          │          │
│          │   │   810    │   │          │          │          │
└────┬─────┘   └────┬─────┘   └────┬─────┘          └────┬─────┘
     │              │              │                     │
┌──────────┐        │              │                     │
│  Block   │        │              │                     │
│ List 830 │        ▼              │                ┌──────────┐
│          │  ┌──────────────────┐ │                │ Override │
└────┬─────┘  │Merge and Add     │ │                │Rules 870 │
     │        │Weights 840       │ │                │          │
     │        └────────┬─────────┘ │                └────┬─────┘
     │                 │           │                     │
     │                 ▼           ▼                     │
     │        ┌──────────────────────┐                   │
     └───────▶│Merge and Subtract Block│                 │
              │      List 850          │                 │
              └──────────┬─────────────┘                 │
                         │                               │
                         ▼                               │
              ┌────────────────────────────────────────┐│
              │  Perform Conversions, if Necessary 880  │◀┘
              └──────────────────┬─────────────────────┘
                                 │
                                 ▼
                      ┌────────────────────┐
                      │Send to URL AutoCorrect│
                      │    Service 890      │
                      └──────────┬─────────┘
                                 │
                                 ▼
```

Fig. 5B

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Universal Resource Locator (URL) Analysis and
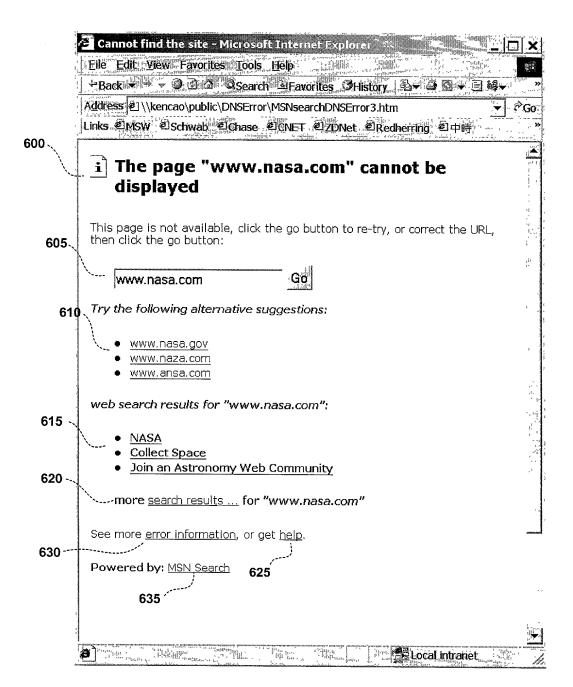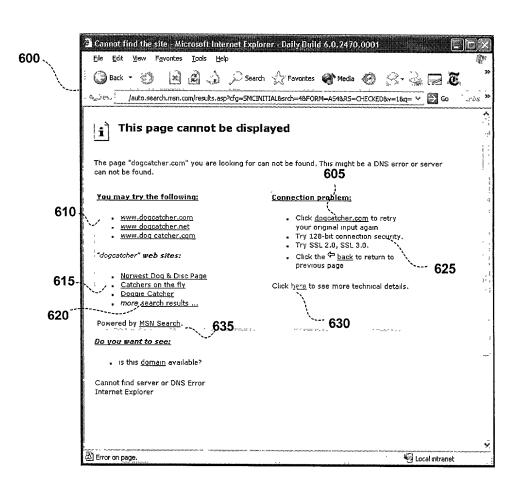Correction
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Fig. 6A

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600

i **The page "www.nasa.com" cannot be displayed**

This page is not available, click the go button to re-try, or correct the URL, then click the go button:

605

| www.nasa.com | Go |

610 *Try the following alternative suggestions:*

- www.nasa.gov
- www.naza.com
- www.ansa.com

web search results for "www.nasa.com":

615

- NASA
- Collect Space
- Join an Astronomy Web Community

620

more search results ... for *"www.nasa.com"*

See more error information, or get help.

630

Powered by: MSN Search   625

635

Address: \\kencao\public\DNSError\MSNsearchDNSError3.htm

Links: MSW Schwab Chase CNET ZDNet Redherring 中時

Cannot find the site - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites History

Local intranet

Fig. 6B

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Cannot find the site - Microsoft Internet Explorer - Daily Build 6.0.2470.0001

File   Edit   View   Favorites   Tools   Help

Back ▾   ✕ ✎ ⟳   🔎 Search   ⭐ Favorites   🎞 Media   ⊘   ⟨⟩ ▾ ✎ ✉ 𝕿   »

Address: /auto.search.msn.com/results.asp?cfg=SMCINITIAL&srch=4&FORM=A54&RS=CHECKED&v=1&q=   ∨   Go   »

ⅈ This page cannot be displayed

The page "dogcatcher.com" you are looking for can not be found. This might be a DNS error or server
can not be found.   **605**

You may try the following: **Connection problem:**

• www.dogcatcher.com   • Click dogcatcher.com to retry
• www.dogcatcher.net   your original input again
• www.dog catcher.com   • Try 128-bit connection security.
                                                       • Try SSL 2.0, SSL 3.0.
"dogcatcher" web sites: • Click the ⇐ back to return to
                                                          previous page   **625**
• Norwest Dog & Disc Page
• Catchers on the fly   Click here to see more technical details.
• Doggie Catcher
• more search results ...

Powered by MSN Search.   **635**   **630**

Do you want to see:

• is this domain available?

Cannot find server or DNS Error
Internet Explorer

Error on page.   Local intranet

600   **610**   **615**   **620**

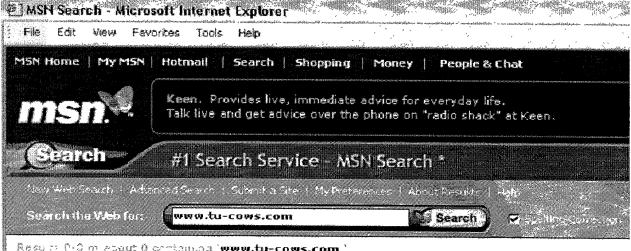# Fig. 6C

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700

Similar web addresses:

•We found these addresses by correcting your spelling, or, locating other addresses like yours.

•Part of these addresses were located by Nielson/Net Ratings URL data source.

back to top

Help on the DNS error page:

•Refresh of the original addresses can be done by clicking the go button without changing edit box.

•The similar web addresses may be the desination URL you intended to go. If it is true, you can click the link and go there directly.

•Related web sites are preview of MSN Search results of the address you put in. You can click the result links and go directly to that site.

•*"more results"* will take you to the full MSN Search results page of the address you put in.

back to top

Technical Details:

• To check your connection settings, click the **Tools** menu, and then click **Internet Options** On the **Connections** tab, click **Settings** The settings should match those provided by your local area network (LAN) administrator or Internet service provider (ISP)

•Some sites require 128-bit connection security Click the **Help** menu and then click **About Internet Explorer** to determine what strength security you have installed.

•If you are trying to reach a secure site, make sure your Security settings can support it Click the **Tools** menu, and then click **Internet Options** On the Advanced tab, scroll to the Security section and check settings for SSL 2 0, SSL 3 0, TLS 1 0, PCT 1 0.

back to top

Fig. 7

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800

Fig. 8